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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,115	03/06/2002	Pratibha Laxman Gai	CL1729 US NA	7998

23906 7590 07/11/2003

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EXAMINER

KOSLOW, CAROL M

ART UNIT

PAPER NUMBER

1755

DATE MAILED: 07/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/092,115

Applicant(s)

GAI, PRATIBHA LAXMAN

Examiner

C. Melissa Koslow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 is/are allowed.
- 6) ☒ Claim(s) 7-12, 14, 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

This action is in response to applicant's amendment of 9 June 2003. The 35 U.S.C. 112, first paragraph rejections based on subject matter which was not described in the specification is withdrawn due to the amendment to the claims. The 35 USC 112, second paragraph rejections over claims 4, 6, 7 and 14 are withdrawn due to the amendment to the claims. The objection to the disclosure and the 35 USC 112, second paragraph rejection over claims 16 is withdrawn due to applicant's arguments. The 35 USC 112, first paragraph rejections with respect to the calcium oxide source is withdrawn upon further consideration since it is clear from the specification that any calcium oxide can be used in the taught process and the molar percentage is based on the calcium oxide source. Applicant's arguments with respect to the remaining objections and rejections have been fully considered but they are not persuasive.

The drawings are objected to because figures 3a, 4a, 7a and 7b are too dark to be clearly scanned. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The newly submitted drawings are still too dark to be clearly scanned.

Claims 7-11 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the method of stabilizing  $\text{AlPO}_4$  comprising admixing an acidic solution of  $\text{AlPO}_4$  to stoichiometric amounts of silica and calcium oxide source where the pH of the mixed solution is about 2.5 and the mole ratio percentages are greater than 0 to less than about 4 mol% calcium nitrate; greater than 0 to less than about 10 mol% silica and the remained is  $\text{AlPO}_4$ , adding a base to the mixture to raise the pH to about 9, dehydrating the mixture to produce a precipitate and then heating the precipitate at  $500^\circ\text{C}$  does not reasonably provide

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enablement for the method of stabilizing  $\text{AlPO}_4$  comprising admixing an acidic solution of  $\text{AlPO}_4$  to stoichiometric amounts of silica and a calcium oxide source where the mole ratio percentages are greater than 0 to less than about 4 mol% calcium; greater than 0 to less than about 10 mol% silica and the remained is  $\text{AlPO}_4$ , forming a slurry from the above mixture, dehydrating the slurry to produce a precipitate and then heating the precipitate. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

The claims recite the method of stabilizing  $\text{AlPO}_4$  comprising admixing an acidic solution of  $\text{AlPO}_4$  to stoichiometric amounts of silica and a calcium oxide source where the mole ratio percentages are greater than 0 to less than about 4 mol% calcium; greater than 0 to less than about 10 mol% silica and the remained is  $\text{AlPO}_4$ , forming a slurry from the above mixture, dehydrating the slurry to produce a precipitate and then heating the precipitate. The claims encompass any method of forming a slurry and any heating temperature. However, the specification only teaches, on pages 3 and 4 and in the examples, the method of stabilizing  $\text{AlPO}_4$  comprising admixing an acidic solution of  $\text{AlPO}_4$  to stoichiometric amounts of silica and a calcium oxide source where the pH of the mixed solution is about 2.5 and the mole ratio percentages are greater than 0 to less than about 4 mol% calcium nitrate; greater than 0 to less than about 10 mol% silica and the remained is  $\text{AlPO}_4$ , adding a base to the mixture to raise the pH to about 9, dehydrating the mixture to produce a precipitate and then heating the precipitate at  $500^\circ\text{C}$ . Such a limited disclosure does not support the breadth of the instant claims.

The amendment where the pH adjusting step is deleted did not overcome the rejection.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This claim recites the limitation "the pH in step (b)". There is insufficient antecedent basis for this limitation in the claim or in claim 7.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 12, 14, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 92/00929.

This reference teaches a single phase  $\text{AlPO}_4$  composition comprising silica and boron oxide dopants where the composition has the  $\beta$ -cristobalite structure (examples 1 and 2). This means the composition has a cubic structure, a space group F-43m and a length of about 7.2 Å. Page 6 teaches this composition is stable at temperatures up to 1200°C. Boron has an ionic radius of 0.35 Å, which falls within the scope of the claimed range "about 1 Å". The reference teaches the claimed composition.

Applicant argues that the reference teaches the taught composition is not a single phase compound and states page 7, line 30 to page 8, line 8 teaches the compound contains tridymite. Examples 1 and 2 clearly teach a single phase compound. Page 7, line 30 to page 8, line 8 discusses the structure of the known phases of aluminum phosphate. There is no teaching in this section that the taught  $\text{AlPO}_4$  composition comprising silica and boron oxide dopants and which has the  $\beta$ -cristobalite structure also contains tridymite. The rejection is maintained.

Claims 1-6 are allowable over the cited art of record.

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Claim 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 1-3, 5 and 15 are allowable for the reasons given in the previous office action. The composition of claims 4 and 6 are allowable over the cited art of record since there is no teaching or suggestion of the claimed composition. The closest art is WO 92/929 which teaches a composition of 12-70 mol%  $\text{BPO}_4$ , 2-88 mol%  $\text{AlPO}_4$  and 0-77 mol%  $\text{SiO}_2$ .

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (703) 308-3817. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell, can be reached at (703) 308-3823.

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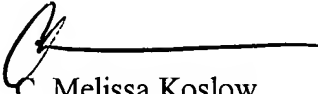
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The fax number for Amendments filed under 37 CFR 1.116 or After Final communications is (703) 872-9311. The fax number for all other official communications is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661 or (703) 308-0662.

cmk  
July 10, 2003



C. Melissa Koslow  
Primary Examiner  
Tech. Center 1700